

**What Is Claimed Is:**

1. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

5 (a) a nucleotide sequence encoding a polypeptide comprising amino acids from about -20 to about 129 in SEQ ID NO:2;

(b) a nucleotide sequence encoding a polypeptide comprising amino acids from about -19 to about 129 in SEQ ID NO:2;

10 (c) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 129 in SEQ ID NO:2;

(d) a nucleotide sequence encoding a polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519;

15 (e) a nucleotide sequence encoding the mature chemokine β-15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519; and

(f) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), or (e).

20 2. The nucleic acid molecule of claim 1 wherein said polynucleotide has the complete nucleotide sequence in SEQ ID NO:1.

25 3. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence in SEQ ID NO:1 encoding the chemokine β-15 polypeptide having the complete amino acid sequence in SEQ ID NO:2.

4. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence in SEQ ID NO:1 encoding the mature chemokine β-15 polypeptide having the amino acid sequence in SEQ ID NO:2.

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5. The nucleic acid molecule of claim 1 wherein said polynucleotide has the complete nucleotide sequence of the cDNA clone contained in ATCC Deposit No. 97519.

5       6. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence encoding the chemokine  $\beta$ -15 polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519.

10      7. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence encoding the mature chemokine  $\beta$ -15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519.

15      8. An isolated nucleic acid molecule comprising a polynucleotide which hybridizes under stringent hybridization conditions to a polynucleotide having a nucleotide sequence identical to a nucleotide sequence in (a), (b), (c), (d), (e), or (f) of claim 1 wherein said polynucleotide which hybridizes does not hybridize under stringent hybridization conditions to a polynucleotide having a nucleotide sequence consisting of only A residues or of only T residues.

20      9. An isolated nucleic acid molecule comprising a polynucleotide which encodes the amino acid sequence of an epitope-bearing portion of a chemokine  $\beta$ -15 polypeptide having an amino acid sequence in (a), (b), (c), (d), or (e) of claim 1.

10. <sup>35</sup> A method for making a recombinant vector comprising inserting an isolated nucleic acid molecule of claim <sup>37</sup> 10 into a vector.

11. <sup>36</sup> A recombinant vector produced by the method of claim <sup>35</sup> 10.

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12. A method of making a recombinant host cell comprising introducing the recombinant vector of claim 11 into a host cell.

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13. A recombinant host cell produced by the method of claim 12.

5 14. A recombinant method for producing a chemokine β-15 polypeptide, comprising culturing the recombinant host cell of claim 13 under conditions such that said polypeptide is expressed and recovering said polypeptide.

10 15. An isolated chemokine β-15 polypeptide having an amino acid sequence at least 95% identical to a sequence selected from the group consisting of:

(a) amino acids from about -20 to about 129 in SEQ ID NO:2;  
(b) amino acids from about -19 to about 129 in SEQ ID NO:2;  
(c) amino acids from about 1 to about 129 in SEQ ID NO:2;  
(d) the amino acid sequence of the chemokine β-15

15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519;

(e) the amino acid sequence of the mature chemokine β-15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519; and

20 (f) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d), or (e).

16. An isolated antibody that binds specifically to a chemokine β-15 polypeptide of claim 15.

25 17. An isolated nucleic acid molecule comprising a polynucleotide encoding a chemokine β-15 polypeptide wherein, except for at least one

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conservative amino acid substitution, said polypeptide has a sequence selected from the group consisting of:

- (a) a nucleotide sequence encoding a polypeptide comprising amino acids from about -20 to about 129 in SEQ ID NO:2;
- 5 (b) a nucleotide sequence encoding a polypeptide comprising amino acids from about -19 to about 129 in SEQ ID NO:2;
- (c) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 129 in SEQ ID NO:2;
- 10 (d) a nucleotide sequence encoding a polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519;
- (e) a nucleotide sequence encoding the mature chemokine β-15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519; and
- 15 (f) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), or (e).

18. An isolated chemokine β-15 polypeptide wherein, except for at least one conservative amino acid substitution, said polypeptide has a sequence selected from the group consisting of:

- 20 (a) amino acids from about -20 to about 129 in SEQ ID NO:2;
- (b) amino acids from about -19 to about 129 in SEQ ID NO:2;
- (c) amino acids from about 1 to about 129 in SEQ ID NO:2;
- (d) the amino acid sequence of the chemokine β-15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519;
- 25 (e) the amino acid sequence of the mature chemokine β-15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519; and
- (f) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d), or (e).

19. A method for treatment of an individual in need of an increased level of chemokine β-15 activity comprising administering to said individual a composition comprising an isolated polypeptide of claim 15.

5 20. A method useful during the diagnosis of a disorder of the thymus in an individual comprising:

(a) measuring chemokine β-15 gene expression level in cells or body fluid of said individual;

(b) comparing the chemokine β-15 gene expression level of said individual with a standard chemokine β-15 gene expression level, whereby an increase or decrease in the chemokine β-15 gene expression level of said individual compared to said standard expression level is indicative of a thymus disorder.

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